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**Fleck**

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(54) **METHODS AND SYSTEMS FOR PROVIDING AERIAL ASSISTANCE**

(71) Applicant: **Google Inc.**, Mountain View, CA (US)

(72) Inventor: **Mathias Samuel Fleck**, Milpitas, CA (US)

(73) Assignee: **Google Inc.**, Mountain View, CA (US)

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This patent is subject to a terminal disclaimer.

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See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

6,084,510 A \* 7/2000 Lemelson ..... G08B 15/004 340/539.13  
7,957,837 B2 6/2011 Ziegler et al.

(Continued)

*Primary Examiner* — Fadey Jabr

*Assistant Examiner* — Angelina Shudy

(74) *Attorney, Agent, or Firm* — McDonnell Boehnen Hulbert & Berghoff LLP

(57) **ABSTRACT**

Embodiments described herein may relate to systems and methods for navigating to an emergency situation. An alert device may be controlled to issue alerts to draw the attention of bystanders to associated supplies for a situation. An illustrative method involves (a) receiving, by a computing system, a transmission indicating a situation at a designated location; (b) the computing system determining an approximate target area associated with the designated location; (c) the computing system making a determination that an alert device is located within the approximate target area; and (d) in response to the determination that the alert device is located within the approximate target area, the computing system executing instructions to activate at least one alert on the alert device indicating the situation and the designated location of the situation.

**10 Claims, 10 Drawing Sheets**

